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CLAIMS:

What is claimed is:

1. A method for emulating multiple logical ports on a
5 physical port, the method comprising:
 providing a subnet management queue pair for a
physical port;
 providing a plurality of logical ports, wherein
packets intended for the plurality of logical ports are
10 received at the physical port; and
 providing an aliased subnet manager queue pair for
each of the plurality of logical ports.
2. The method of claim 1, further comprising:
15 receiving a packet at the physical port; and
 responsive to the packet being intended for a given
logical port, looping the packet back to the given
logical port.
- 20 3. The method of claim 1, further comprising:
 sending a packet from an aliased subnet manager
queue pair; and
 responsive to the packet being intended for a given
logical port, looping the packet back to the subnet
25 management queue pair for the physical port.
4. The method of claim 3, further comprising:
 responsive to the packet being intended for an
external port, routing the packet to the physical port.

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5. The method of claim 1, further comprising:
providing a logical switch for the physical port.
6. The method of claim 1, wherein each aliased subnet
5 manager queue pair is associated with a logical
partition.
7. The method of claim 1, further comprising:
providing a hypervisor subnet management agent,
10 wherein the hypervisor subnet management agent routes
traffic for the plurality of logical ports.
8. The method of claim 7, wherein the hypervisor subnet
management agent transmits response packets on behalf of
15 the plurality of logical ports.
9. The method of claim 1, wherein each subnet
management queue pair is an InfiniBand queue pair zero.
- 20 10. An apparatus for emulating multiple logical ports on
a physical port, the apparatus comprising:
a subnet management queue pair for a physical port;
a plurality of logical ports, wherein packets
intended for the plurality of logical ports are received
25 at the physical port; and
an aliased subnet manager queue pair for each of the
plurality of logical ports.

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11. The apparatus of claim 10, further comprising:
a hypervisor subnet management agent, wherein the
hypervisor subnet management agent routes traffic for the
plurality of logical ports.

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12. The apparatus of claim 11, wherein the hypervisor
subnet management agent receives a packet at the physical
port and, responsive to the packet being intended for a
given logical port, loops the packet back to the given
10 logical port.

13. The apparatus of claim 11, wherein the hypervisor
subnet management agent transmits response packets on
behalf of the plurality of logical ports.

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14. The apparatus of claim 10, further comprising:
a logical switch associated with the physical port.

15. The apparatus of claim 14, wherein an aliased subnet
20 manager queue pair sends a packet and wherein the logical
switch, responsive to the packet being intended for a
given logical port, loops the packet back to the subnet
management queue pair for the physical port.

25 16. The apparatus of claim 15, wherein the logical
switch, responsive to the packet being intended for an
external port, routes the packet to the physical port.

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17. The apparatus of claim 10, wherein each aliased subnet manager queue pair is associated with a logical partition.

5 18. The apparatus of claim 10, wherein each subnet management queue pair is an InfiniBand queue pair zero.

19. A host channel adapter comprising:

one or more physical ports;

10 a queue pair zero for each physical port, wherein packets received at a physical port are placed in a corresponding queue pair zero;

a plurality of logical host channel adapters, wherein each logical host channel adapter is associated
15 with a logical partition, wherein each logical host channel adapter has at least one logical port, and wherein each logical port has an associated aliased queue pair zero;

a hypervisor subnet management agent, wherein the
20 hypervisor subnet management agent receives packets at a queue pair zero for a physical port, transmits response packets on behalf of the logical ports, and routes the packets to the intended logical ports.

25 20. The host channel adapter of claim 19, further comprising:

a logical switch associated with a given physical port, wherein the logical switch receives a packet from an aliased queue pair zero and, responsive to the packet

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being intended for a given logical port, loops the packet back to a queue pair zero for a physical port.